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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/521,915	03/09/2000	Toshihiro Shima	Q58162	3050
7590 05/13/2005			EXAMINER	
Sughrue Mion Zinn MacPeak & Seas PLLC			POON, KING Y	
2100 Pennsylvania Ave N W			ART UNIT	
Washington, DC 20037-3202			PAPER NUMBER	
			2624	

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 09/521,915	<b>Applicant(s)</b> SHIMA, TOSHIHIRO	
	<b>Examiner</b> King Y. Poon	<b>Art Unit</b> 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 January 2005 and 15 November 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-12,14 and 15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-12,14 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/18/2005</u> . | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/14/2004 has been entered.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations of "wherein the printer includes at least three modes comprising: (i) a mode in which said received data is input to said image data generation means via said auxiliary storage; ii) a first bypass mode in which said received data is input to said image data generation means via said second buffer memory without being input to either said first buffer memory or said auxiliary storage; and (iii) a second by pass mode in which said received data is input to said image data generation means via said first and second buffer memories without being input to said auxiliary storage wherein selection of a mode to be used is based upon said detected data processing state and an availability of empty blocks of the plural memory blocks", "wherein the printer includes at least three modes comprising: (i) a mode via the auxiliary storage in which data received by said

Art Unit: 2624

communication processing means is input to said image data generation means sequentially via said first buffer memory, said writing means, said auxiliary storage, said reading means and said second buffer memory (ii) a first bypass mode in which data received by said communication processing means is input to said image data generation means via said second buffer memory without being input to either said first buffer memory or said auxiliary storage; and (iii) a second bypass mode in which data received by said communication processing means is input to said image data generation means without being input to said auxiliary storage wherein selection of a mode to be used is based upon said detected data processing state and an availability of empty blocks of the plural memory blocks” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New

Art Unit: 2624

Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1, 2, 4-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 1: The limitations of “wherein the printer includes at least three modes comprising: (i) a mode in which said received data is input to said image data generation means via said auxiliary storage; ii) a first bypass mode in which said received data is input to said image data generation means via said second buffer memory without being input to either said first buffer memory or said auxiliary storage; and (iii) a second by pass mode in which said received data is input to said image data generation means via said first and second buffer memories without being input to said auxiliary storage wherein selection of a mode to be used is based upon said detected data processing state and an availability of empty blocks of the plural memory blocks”,

Art Unit: 2624

are subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 12: The limitations of “wherein the printer includes at least three modes comprising: (i) a mode via the auxiliary storage in which data received by said communication processing means is input to said image data generation means sequentially via said first buffer memory, said writing means, said auxiliary storage, said reading means and said second buffer memory (ii) a first bypass mode in which data received by said communication processing means is input to said image data generation means via said second buffer memory without being input to either said first buffer memory or said auxiliary storage; and (iii) a second bypass mode in which data received by said communication processing means is input to said image data generation means without being input to said auxiliary storage wherein selection of a mode to be used is based upon said detected data processing state and an availability of empty blocks of the plural memory blocks” are subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 2, 4-11 are rejected under 35 U.S.C. 112, first paragraph because they depend on rejected claim 1.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 2624

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 2, 4-12 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1: It is unclear the "plural memory blocks" of the last line in claim 1 is referring to the plural memory blocks of the second buffer memory or the plural memory blocks of the first memory or the memory blocks of both the first buffer memory and the second buffer memory.

The limitation "via said auxiliary storage", according to an ordinary person, has the meaning of going through only the auxiliary storage. However, from the structure of the claims, it appears that the "via said auxiliary storage" is intended to mean something different-going through some buffer memories and the auxiliary storage. The applicant is required to particularly pointing out and distinctly claiming the path of the received data of mode (i).

Regarding claim 12: It is unclear the "plural memory blocks" of the last line in claim 12 is referring to the plural memory blocks of the second buffer memory or the plural memory blocks of the first memory or the memory blocks of both the first buffer memory and the second buffer memory.

It is unclear the exact path of the data received of the first bypass mode and the second by pass mode. The applicant is required to particularly pointing out and distinctly claiming the path of the received data of the first by pass mode and the second by pass mode.

Claims 2, 4-11 are rejected under 35 U.S.C. 112, second paragraph because they depend on rejected claim 1.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bender (US 5,791,790) in view of Yonei.

In accordance with claim 14, Bender discloses a data processing method of printer 10 (figure 1 and col. 1 lines 10-14), which can store data received over a network 15 in an auxiliary storage device 128 (figure 2), namely an internal hard disk (col. 8 lines 28-30).

Bender further discloses a mode in which data passes through the hard drive 128, and a mode in which data bypasses the hard drive 128, in Bender's method, data can be written to the hard drive during processing (col. 9 lines 28-32), or it can bypass the hard drive during processing (col. 9 lines 49-53). 68. For the mode in which data is stored in the hard drive, Bender discloses a step for receiving data over the network; in Bender's method, INA 1 (11 figure 1) receives information over the LAN 15 (col. 6 lines 11-18).

Bender further discloses a step for storing received data in the hard drive 128, in



Art Unit: 2624

Bender's system received data is sent to the job buffering task 104 (figure 2 and col. 9 lines 1-3), from there, data is sent to the disk write buffer 1 16, i.e. the first buffer memory, and from there, data is sent to the hard disk 128 (col. 9 lines 17-19).

70. Bender further discloses a step for reading the data in the hard drive 128', in Bender's system, data is read by the disk write buffer 136, i.e. the second buffer memory, (col. 9 lines 28-32).

Bender further discloses a step for interpreting the data and generating image data; in Bender's system the print controller "interprets incoming print jobs" and generates image data from the interpreted data to drive the print engine (col. 7 lines 36-45).

Bender further disclosed a step for printing based on the image data; in Bender's system, the printer controller controls the printing of the print engine (col. 7 lines 36-45).

For the mode in which data bypasses the hard drive (the second bypass mode), Bender discloses a step for receiving data over the network; in Bender's method, INA 1 (11 figure 1) receives information over the LAN 15 (col. 6 lines 1 1-18). In Bender's bypass mode, only the step of storing data on the hard drive 128 is skipped (col. 9 lines 49-53).

Bender further discloses a step for storing received data in the first buffer memory (disk write buffer 1 16); in Bender's system received data is sent to the job buffering task 104 (figure 2 and col. 9 lines 1-3), from there, data is sent to the disk write buffer 1 16, i.e. the first buffer memory (col. 9 lines 3-5).

Bender further discloses a step for extracting data from the first buffer memory (disk write buffer 1 16) to the second buffer memory (disk read buffer 136); in Bender's system data is sent from the disk write buffer 116 to the disk read buffer 136 in the bypass mode (col. 9 lines 49-53).

Bender further discloses a step for interpreting the data and generating image data; in Bender's system the print controller "interprets incoming print jobs" and generates image data from the interpreted data to drive the print engine (col. 7 lines 36-45).

Bender further discloses a step for printing based on the image data; in Bender's system, the printer controller controls the printing of the print engine (col. 7 lines 36-45).

Bender does not disclose expressly an alternative bypass mode. However, Yonei discloses a different bypass mode, which corresponds to the first bypass mode.

For the other mode in which data bypasses the hard drive (the first bypass mode), Yonei discloses a step for receiving data over the network; in Yonei's method, the printer 1 receives information over the network 2 (page 1 lines 5-10).

Yonei further discloses a step for storing this received data in the second memory buffer, in Yonei's method, data is sent directly to buffer 1 14a for immediate printout in the bypass mode (page 3 lines 19-24).

Yonei further discloses a step for extracting data from the buffer to interpret it and generate image data; in Yonei's system, the data in the buffer is then developed into a bit map (page 4 lines 22-23).

Yonei further discloses a step for printing the data based upon the image data (page 5 line 9).

Bender and Yonei are combinable because they are from the same field of endeavor, namely printing apparatuses with auxiliary storage and modes of bypassing auxiliary storage.

Therefore, it would have been obvious to one of ordinary skill in the art to add the bypass mode taught by Yonei to the method Bender. The motivation for doing so would have been to decrease printing time, by saving the time it takes to transfer data to and from the disk write buffer 116.

It is well-known in the art that data is transmitted and stored in blocks, as described in "Response to Arguments" section of final rejection mailed 7/15/2004.

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yonei in view of Bender in further view of Heart.

In accordance with claim 15, Bender discloses a data processing method of printer 10 (figure 1 and col. 1 lines 10-14), which can store data received over a network 15 in an auxiliary storage device 128 (figure 2), namely an internal hard disk (col. 8 lines 28-30).

Bender further discloses a mode in which data passes through the hard drive 128, and a mode in which data bypasses the hard drive 128; in Bender's method, data can be written to the hard drive during processing (col. 9 lines 28-32), or it can bypass the hard drive during processing (col. 9 lines 49-53).

For the mode in which data is stored in the hard drive, Bender discloses a step for receiving data over the network; in Bender's method, INA 1 (1 1 figure 1) receives information over the LAN 15 (col. 6 lines 1 1-18).

Bender further discloses a step for storing received data in the hard drive 128; in Bender's system received data is sent to the job buffering task 104 (figure 2 and col. 9 lines 1-3), from there, data is sent to the disk write buffer 116, i.e. the first buffer memory, and from there, data is sent to the hard disk 128 (col. 9 lines 17-19).

Bender further discloses a step for reading the data in the hard drive 128; in Bender's system, data is read by the disk write buffer 136, i.e. the second buffer memory, (col. 9 lines 28-32).

Bender further discloses a step for interpreting the data and generating image data; in Bender's system the print controller "interprets incoming print jobs" and generates image data from the interpreted data to drive the print engine (col. 7 lines 36-45).

Bender further discloses a step for printing based on the image data; in Bender's system, the printer controller controls the printing of the print engine (col. 7 lines 36-45).

For the mode in which data bypasses the hard drive (the second bypass mode), Bender discloses a step for receiving data over the network; in Bender's method, INA 1 (11 figure 1) receives information over the LAN 15 (col. 6 lines 1 1-18). In Bender's bypass mode, only the step of storing data on the hard drive 128 is skipped (col. 9 lines 49-53).

Bender further discloses a step for storing received data in the first buffer memory (disk write buffer 116); in Bender's system received data is sent to the job buffering task 104 (figure 2 and col. 9 lines 1-3), from there, data is sent to the disk write buffer 116, i.e. the first buffer memory (col. 9 lines 3-5).

Bender further discloses a step for extracting data from the first buffer memory (disk write buffer 116) to the second buffer memory (disk read buffer 136); in Bender's system data is sent from the disk write buffer 116 to the disk read buffer 136 in the bypass mode (col. 9 lines 49-53).

Bender further discloses a step for interpreting the data and generating image data; in Bender's system the print controller "interprets incoming print jobs" and generates image data from the interpreted data to drive the print engine (col. 7 lines 36-45).

Bender further discloses a step for printing based on the image data; in Bender's system, the printer controller controls the printing of the print engine (col. 7 lines 36-45).

Bender does not disclose expressly that in this bypass mode data is transposed between the first buffer and the second buffer, although Bender does disclose that the second bypass mode be realized by transferring data directly from the first buffer (disk write buffer 116) to the second buffer (disk read buffer 136) (col. 9 lines 49-67). Heart discloses that memory addresses can be transposed when transferring data from one location to another (col. 4 lines 52-57).

Bender is combinable with Heart because they are from similar problem solving area, namely transferring data from one memory to another.

Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art to allow data to be sent from one buffer to another by transposing memory blocks as taught in Head (col. 4 lines 52-57). The motivation for doing so would have been to get data from one buffer to another quickly.

Bender does not disclose expressly an alternative bypass mode. However, Yonei discloses a different bypass mode, which corresponds to the first bypass mode.

For the other mode in which data bypasses the hard drive (the first bypass mode), Yonei discloses a step for receiving data over the network; in Yonei's method, the printer 1 receives information over the network 2 (page 1 lines 5-10).

Yonei further discloses a step for storing this received data in the second memory buffer, in Yonei's method, data is sent directly to buffer 114a for immediate printout in the bypass mode (page 3 lines 19-24).

Yonei further discloses a step for extracting data from the buffer to interpret it and generate image data; in Yonei's system, the data in the buffer is then developed into a bit map (page 4 lines 22-23).

Yonei further discloses a step for printing the data based upon the image data (page 5 lines 9).

Bender and Yonei are combinable because they are from the same field of endeavor, namely printing apparatuses with auxiliary storage and modes of bypassing auxiliary storage.

Therefore, it would have been obvious to one of ordinary skill in the art to add the bypass mode taught by Yonei to the method Bender. The motivation for doing so would

Art Unit: 2624

have been to decrease printing time, by saving the time it takes to transfer data to and from the disk write buffer 116.

It is well-known in the art that data is transmitted and stored in blocks, as described in "Response to Arguments" section of final rejection mailed 7/15/2004.

### ***Response to Arguments***

With respect to applicant's argument with respect to amended claims 1, 2, 4-12, has been considered.

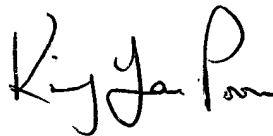
Due to the confusion of the claimed limitation of claims 1, 2, 4-12; the examiner cannot reasonably interpret the claimed limitation; thereby cannot reasonably apply prior art rejection.

Applicant has not argued the rejection of claims 14 and 15 in the remarks filed on 11/15/2004.

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to King Y. Poon whose telephone number is (571) 272-7440.

3/22/05



KING Y. POON  
PRIMARY EXAMINER